

SEQUENCE LISTING

<110> Ritchie, Steven W.
Bruce, Wesley B.

<120> MAIZE METALLOTHIONEIN GENE AND PROMOTER

<130> 35718/271431

<150> 09/520,268
<151> 2000-03-07

<150> 60/123,510
<151> 1999-03-08

<160> 18

<170> FastSEQ for Windows Version 4.0

<210> 1
<211> 747
<212> DNA
<213> Zea mays

<220>
<221> promoter
<222> (1)...(747)
<223> Promoter sequence for maize metallothionein

<400> 1

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aaggcgataa cgttttaaac	tggcaacaat atcttagctgt	ttcaaattca ggcgtggaa	120
gctacgccta cgcgcctgg	acggcgtgt aagagccagc	atcggcatca ttgtcaaacg	180
atcgacaagg ccaagaaatt	ccaaatatat tattaataaa	aaagaaggca caaatttagtt	240
tggttttta gtatgtgtgg	cggaggaaat tttgagaacg	aacgtatcaa agaaggcaca	300
agacgatata gattgacgcf	gctagaagtt gcagcaagac	agtgggtacg gtcttatata	360
tcctaataaa taaaaaataa	aactatagtgt tgtcaaatgt	caacaagagg aggaggcagc	420
caaattagca gagggagaca	agtagagcac gccttattag	cttgcttatt tatctgtgg	480
gtgtacttgt taattactgg	cacgcattat caacaacgca	gttctggatg tgaatctaga	540
caaacatttg tctaggttcc	gcacgtatag ttttttcct	ctttttttg ggggggggggt	600
ggggggggga acggaagctg	taataaacgg tacttaggaac	gaaagcaacc gccgcgcga	660
tgtttttca atagattacg	gtgaccttga tgcaccaccg	cgtgctataa aaaccagtgt	720
ccccgagtct actcatcaac	caatcca		747

<210> 2
<211> 612
<212> DNA
<213> Zea mays

<220>
<221> CDS
<222> (69)...(308)
<223> Coding sequence for maize metallothionein

<400> 2					
taactcgaaa cctttcttg tgctctgttc tgtctgtgt tttccaaagc aaacgaaaga					60
ggtcgagg atg tct tgc agc tgc gga tca agc tgc aac tgc gga tca agc					110
Met Ser Cys Ser Cys Gly Ser Ser Cys Asn Cys Gly Ser Ser					
1	5	10			
tgc aag tgc ggc aag atg tac cct gac ctg gag gag aag agc ggc ggg					158
Cys Lys Cys Gly Lys Met Tyr Pro Asp Leu Glu Glu Lys Ser Gly Gly					
15	20	25	30		
ggc gct cag gcc agc gcc gcc gtc gtc ctc ggc gtt gcc cct gag					206
Gly Ala Gln Ala Ser Ala Ala Val Val Leu Gly Val Ala Pro Glu					
35	40	45			
acg aag aag gcg gcg cag ttc gag gcg gcg ggc gag tcc ggc gag gcc					254
Thr Lys Lys Ala Ala Gln Phe Glu Ala Ala Gly Glu Ser Gly Glu Ala					
50	55	60			
gct cac ggc tgc agc tgc ggt gac agc tgc aag tgc agc ccc tgc aac					302
Ala His Gly Cys Ser Cys Gly Asp Ser Cys Lys Cys Ser Pro Cys Asn					
65	70	75			
tgc tga tcctgctgcg ttgtttcggt tgccggcatgc atggatgtca cctttttttt					358
Cys *					

actgtctgct ttgtgcttgt ggctgtcaa gaataaaagga tggagccatc gtctggctcg				418
actctggctc tccggccatgc atgcttggtg tcggttctgt tgtgcttgtg ttgggtgcatt				478
taatcgatg gcatcgatc acaccatgca tctctgatct ctttgcgcca gtgtgtgtga				538
ctatgtccct gtaacgattt gctcagtgtat tgaatatata tacaatactg ttttactaaa				598
aaaaaaaaaaaa aaaa				612

<210> 3
 <211> 79
 <212> PRT
 <213> Zea mays

<400> 3					
Met Ser Cys Ser Cys Gly Ser Ser Cys Asn Cys Gly Ser Ser Cys Lys					
1	5	10	15		
Cys Gly Lys Met Tyr Pro Asp Leu Glu Glu Lys Ser Gly Gly Ala					
20	25	30			
Gln Ala Ser Ala Ala Val Val Leu Gly Val Ala Pro Glu Thr Lys					
35	40	45			
Lys Ala Ala Gln Phe Glu Ala Ala Gly Glu Ser Gly Glu Ala Ala His					
50	55	60			
Gly Cys Ser Cys Gly Asp Ser Cys Lys Cys Ser Pro Cys Asn Cys					
65	70	75			

<210> 4
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<220>
 <223> Gene specific synthetic primer for MT promoter

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isolation

<400> 4
atcttgcgc acttgagct ttagcc 26

<210> 5
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Gene specific primer for MT promoter isolation

<400> 5
cagttgcagc ttgatccgca gctg 24

<210> 6
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Gene specific primer for MT promoter isolation

<400> 6
caggatcctc gacctcttc g 21

<210> 7
<211> 255
<212> DNA
<213> Zea mays

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ctgacctgga ggagacgago accgcggcgcc agggccaccgt cgtcctcgcc gtggccccgg 120
agaagaaggc cggcccggag ttcgtcgagg ccgcggcgga gtccggcgag gccgcccacg 180
gctgcagctg cggtgtggcaac tgcaagtgcg acccctgcaa ctgctgatca catcgatcga 240
cgaccatgga tatga 255

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<212> DNA
<213> Zea mays

<400> 8
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ctgcggatca agctgcaact gcggatcaag ctgcaagtgc ggcaagatgt accctgacct 120
ggaggagaag agcggcgggg ggcgtcaggc cagcggcgcc gccgtcgtcc tcggcggtgc 180
ccctgagacg aagaaggcg ggcagttcga ggcggcgccc gagtcggcg aggccgctca 240
cggtgcagc tgcgg 255

<210> 9
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<221> misc_feature		
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aaatttagcag aggga		15
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<211> 10		
<212> DNA		
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<210> 11		
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<212> DNA		
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<400> 11		
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<400> 12		
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<212> DNA		
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<222> (1)...(9)		
<223> Maize promoter element		
<400> 13		

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<210> 14	
<211> 9	
<212> DNA	
<213> Zea mays	
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<210> 15	
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<221> misc_feature	
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<400> 15	
agttctg	7
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<211> 7	
<212> DNA	
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<400> 16	
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<210> 17	
<211> 9	
<212> DNA	
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<221> misc_feature	
<222> (1)...(9)	
<223> Maize promoter element	
<400> 17	
atagattac	9
<210> 18	
<211> 19	
<212> DNA	

<213> Artificial Sequence

<220>

<223> Oligonucleotide primer

<400> 18

actatagggc acgcgtgg

19